Amendments to the claims (this listing replaces all prior versions):

1. (currently amended) A machine-based method comprising:

receiving data representing current prices of options on an asset, the options being associated with different strike prices of the asset at a future time,

by machine, performing computations to derive from the data an estimate of probabilities corresponding to a price or prices of the asset at a future time,

the computations including

a smoothing operation performed ~~in a volatility domain~~ on the option price data as a function of the corresponding strike price, the operation performed on implied values of a volatility parameter at varying strike prices in the Black-Scholes option pricing formula,

[[an]] a first derivative operation on a result of the smoothing to obtain a first probability distribution, and

~~a shift in a mean of~~ adding a risk premium to the first probability distribution to obtain a second probability distribution, and

making information about the second probability distribution available within a time frame that is ~~useful to investors~~ before the future time.

2. (currently amended) The method of claim 1 in which the data represent a finite number of prices of options at spaced-apart strike prices of the asset, and in which

the first derivative operation to obtain a first probability distribution comprises calculating a set of first differences to form an estimate of the cumulative probability distribution of the price of the asset at a future time.

3. (currently amended) The method of claim 2 in which

obtaining a second probability distribution also includes

adding a risk premium to the prices of options, and

calculating a set of second differences from the set of first differences to form an estimate of the probability ~~distribution~~ density function of the price of the asset at a future time.

4-7.   (Cancelled).

8.   (currently amended) A machine-based method comprising:

receiving data representing prices of options on a given asset at a first time, the options being associated with spaced-apart strike prices of the asset at a future time,

the data also representing prices of options at a second time, in which an underlying price of the asset at the second time is shifted from an underlying price of the asset at the first time, ~~and the second time is sufficiently soon after the first time that any shifting of other variables that affect option prices is small,~~

estimating, based on the prices of the options at the second time, prices of options at the first time corresponding to constructed strike prices other than the spaced-apart strike prices, and

by machine, performing computations to derive from said data an estimate of a quantized implied probability distribution of the price of said asset at a future time, the elements of the quantized probability distribution corresponding to ~~both~~ the prices of options at the first time ~~and~~ together with the prices of options at the first time estimated from the ~~observations~~ prices at the second time.

9.   (currently amended) A machine-based method comprising

receiving data representing current prices of options on a given asset, the options being associated with first ~~spaced-apart~~ strike prices of the asset at a future time,

the data also representing prices of options at a second time, in which an underlying price of the asset at the second time is shifted from an underlying price of the asset at the first time, and

by machine, performing computations to derive from ~~said~~ the data an estimate of probabilities corresponding to a ~~an implied probability distribution of the~~ price or prices of ~~said~~ the asset at a future time,

the ~~mathematical derivation~~ computations including

estimating, based on the prices of the options at the second time, prices of options at the first time corresponding to constructed strike prices other than the first strike prices,

performing a smoothing operation on the option price data and the estimated price data, the operation based on implied values of a volatility parameter at varying strike prices in the Black-Scholes option pricing formula, and

calculating a first derivative to obtain a cumulative probability distribution of the price of the asset at a future time,

the values of the probability distribution corresponding to the prices of options at the first time together with the prices of options at the first time estimated from the prices at the second time, and

making information about said probability distribution available within a time frame that is useful to investors before the future time.

10.-27. (Cancelled).

28.   (new) The method of claim 9 in which the data first strike prices comprise a finite number of spaced-apart strike prices of the asset, and in which

the first derivative operation to obtain a cumulative probability distribution comprises calculating a set of first differences to form an estimate of the cumulative probability distribution of the price of the asset at a future time.